Broadband Over Power Line (BPL) is not an very good idea at increased power levels. some 18 years ago I worked for the University of Utah and over the space of two years I becames very familiar with the limitations of carrier current technologies.

Transformers block the the signals but they are not the only device that attenuates the signals; computers, power conditioners and surge supressors all will try and send the signal to ground as a power surge. The power levels required to over come this tend to cause problems for sensitive devices.

It was these very issues that caused the University to abandon a centeral signal generator because it was causing problems in downtown Salt Lake.

Several Years ago Novell got all excited about power line control of appliances connecting them to a network.

They got out of the idea with in 2 years. Why in my option because power lines do not make a good carrier of network or broadband information. The problems of noise and interference are such that it is like wearing a sign that says I am stupid or kick me.

It sounds like a great idea but when you push the power levels that make it cheap and workable for the technology you will create a much greater problem for other communications RF and other wise.